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Title: GLOBE Sustainable Development Protocols and Training
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Body of abstract

Sustainable Development (SD) is now an integral part of the National Curriculum in England and yet many teachers struggle to find meaningful ways to address the issue. We at GLOBE-UK have designed a pack of simple activities following the GLOBE model, whereby students measure their use of resources and then enter their results onto a Sustainable Development database. The activities are very simple but teachers have requested training so that they understand the issues behind the activities. In response to these requests GLOBE UK has developed a training course for primary and secondary teachers helping them to understand the relevance of SD to the curriculum, to their school, to their students and to their own personal lives.

Paper

"Sustainable lifestyles and ways of working are central to overcoming poverty and conserving and protecting the natural resource base for all forms of life. Sustainable methods of production are needed in agriculture, forestry, fishing and manufacturing. Use of resources need to be minimised, and pollution and waste reduced."
http://portal.unesco.org/

In 1998 the UK government set up an advisory panel of Sustainable Development experts directed to "work together to identify gaps, opportunities, priorities and partnerships for action in providing sustainable development education"
Sustainable Development Education Panel, (2003). *Understanding, conviction and Commitment – the Fifth Annual Report*
http://www.defra.gov.uk/environment/sustainable/educpanel/

In 2003 the Department for Education and Skills (DfES) released its Sustainable Development Action Plan. Stating that "All learners will develop the skills, knowledge and value base to be active citizens in creating a more sustainable society". The teaching of SD became a requirement for Science, Citizenship, Geography and Design and Technology meaning that teachers must integrate SD issues into their teaching. DfES also expect to see SD promoted across the whole curriculum and inspectors will look to see that it is taken on as a whole school issue.
http://www.dfes.gov.uk/sd/

Teachers in England must adhere to the National Curriculum, a prescriptive teaching scheme that informs and guides teachers in each subject area. The demands of exams and performance tables force teachers to stick to the National Curriculum and often rule out many of the wonderful activities that sit slightly outside the scope of it. Once SD became a requirement of the National Curriculum the demand for teaching resources and methods began to grow.

GLOBE UK developed an initial set of 4 SD protocols encouraging students to collect data and input it to a database (hosted by www.globe.org.uk). The protocols focussed on four key SD

areas: Waste, Energy, Transport and Biodiversity. The protocols were well received and reviewed by both teachers and other professionals and so the project was further developed with the addition of a fifth topic: Water.

The protocols follow the GLOBE format, with Teacher Pages and Student Pages. Teacher Pages provide links to the National Curriculum and include background information, research and project ideas. Pupil pages include a full set of instructions for carrying out the activity and a data collection sheet.

To date ten protocols have been published, by March 2005 there will be twenty protocols in total. They are very simple and involve students in the monitoring of their own habits and those of the school. For example they might measure the schools use of energy or survey the schools grounds to identify habitats.

The idea is that students (either as a class or as member of the schools eco-committee) carry out the protocols once a term and compare their data over time. As more schools (and indeed more countries) start to use the SD activities so schools can compare their habits and use of resources with others. We then encourage students to take responsibility and to find ways to improve their schools results – by canvassing for energy efficient light bulbs or by protecting a particular habitat, etc.

To back up the protocols a very simple database has been developed. The database is mostly icon driven in order to simplify the translation into other languages. The data entry pages match the data collection sheets students use to collate their data, thus simplifying the whole process. GLOBE usernames and passwords are still needed before data can be entered onto the database and new schools must contact GLOBE UK in order to register for the database.

To date the SD protocols have been translated into French and will soon be available in German - we would like to see them translated into all GLOBE languages.

The activities were developed to be self-explanatory and so take up a very small part of the regular GLOBE training schedule but teachers have requested more!
In response to requests from teachers and from Local Education Authorities we have now developed an SD training course. Attendance at a course is not required for schools to use the SD protocols (though the schools do need to be GLOBE trained) but we have found that now the course is available it is very popular. Teachers are looking for background information about SD and about Education for Sustainable Development (ESD), they want to know more about environmental indicators and climate change and would like to have sign posts to point them to other resources and information.
Of course the one day SD training course does not aim to supply teachers with all the facts or knowledge about the complex SD issues. However we do aim to give teachers a background to SD - an insight into climate change, into the research been carried out world-wide, into the reasons behind the move to live a more sustainable life and into some of the international, governmental and local policies.
We also aim to give them a way of integrating ESD into their own teaching and a way to tick the National Curriculum boxes thus freeing them to be more creative in their SD teaching.

It is very early days for our SD training but the activities are now being used in school and the database is building, we hope to see it develop and grow and would welcome feedback and ideas from our GLOBE friends around the world.